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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,216	05/12/2006	Masaki Fukumori	Q94896	1179

23373 7590 01/02/2008

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EXAMINER	
REDDY, KARUNA P	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
01/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,216	FUKUMORI ET AL.	
	Examiner	Art Unit	
	Karuna P. Reddy	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-11* is/are rejected.

7)☒ Claim(s) *2 and 5-6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed on 11/2/2007. Applicant amended claims 1-2, 4, 8, 11 and cancelled claim 3. Claims 1-2 and 4-11 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1 recites "epoxy compound selected from the group consisting of an epoxidized vegetable oil and an epoxidized fatty acid ester" while the dependent claim 2 recites "an epoxy compound", which is broader than the epoxides of independent claim 1.

Claims 5 and 6 are subsumed by the objection to claim 2.

Claim Rejections - 35 USC § 103

4. Claims 1-2, 4-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US 6, 472, 019 B1) in view of Di Giaimo (US 3, 496, 134).

Yamaguchi et al disclose a treated textile involving the step of applying treatment liquid, wherein the treatment liquid contains a water- and oil-repelling agent (abstract). The water and oil-repelling agent is generally a fluorine containing compound. The fluorine containing compound is a fluorine containing polymer. The fluorine containing polymer may be a polymer comprising a repeat unit derived from a fluoroalkyl group containing monomer such as fluoroalkyl group containing (meth)acrylate (column 2, lines 22). The fluorine containing polymer may be a copolymer comprising (A-I) a repeat unit derived from a monomer having a fluoroalkyl group, (A-II) a repeat unit derived from vinyl chloride and/or vinylidene chloride and (A-III) a repeat unit derived from a fluorine free monomer (column 7, lines 25-33). Various emulsifying agents such as nonionic emulsifying agent can be used (column 9, lines 43-46).

Yamaguchi et al is silent with respect to hydrochloric acid-trapping compound.

However, Di Giaimo teaches that the well recognized sensitivity of polyvinyl chloride i.e. halogen containing polymers to light and heat is dealt with by the addition of heat or light stabilizers. Conventional heat stabilizers are sodium carbonate, barium stearate which reads on the metal salt of an acid of claim 5 and an organic epoxy hydrochlorophyl (column 1, lines 39-43, lines 49-

50) such as epoxidized soybean oil (column 3, line 1-2). Heat or light stabilizers read on the hydrochloric acid-trapping compound of instant invention. Therefore, it would have been obvious to add heat or light stabilizers to halogen containing polymers to prevent from degradation owing to the sensitivity of polyvinyl chloride to light.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US 6, 472, 019 B1) in view of Di Giaimo (US 3, 496, 134) in view of Snyder (US 3, 617, 188).

The discussion with respect to Yamaguchi et al in view of Di Giaimo in paragraph 4 is incorporated herein by reference.

Yamaguchi et al is silent with respect to three different nonionic surfactants.

However, Snyder teaches a mineral oil composition in conjunction with other compositions such as those which impart permanent press and water-repellency characteristics to a textile material (abstract). The selection of a suitable emulsifying agent for forming the emulsion concentrate is dependent on the method by which the mineral oil is applied to the textile material. In general preferred emulsifiers are nonionic. It has been found that the desired stability can be achieved by using a blend of different nonionic emulsifiers. Therefore, it would have been obvious to use a blend of three different nonionic emulsifiers to obtain the desired stability.

Response to Arguments

6. Applicant's arguments with respect to rejection of claims 1-5, 7-8, 10-11 under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US 6, 472, 019 B1) in view of Greenspan et al (US 2, 684, 353), have been considered and are persuasive with respect to salts of epoxidized acids of soybean oil being different from the epoxidized vegetable oil of present claims. Accordingly, the rejection of claims 1-5, 7-8 and 10-11 over the cited combination of references is withdrawn.

7. Applicant's arguments filed 11/2/007 have been fully considered but they are not persuasive. Specifically applicants argue that, (A) Di Giaimo relates to solid polymer which is different from aqueous dispersion; (B) Di Giaimo relates to vinyl chloride polymer; (C) dispersion effect of organo-tin compound and the cadmium or barium salts have the dispersion effect which is poor for the fluorine-containing aqueous dispersion; and (D) Snyder teaches a blend of different nonionic emulsifiers in promoting stability of a mineral oil emulsion.

With respect to (A), Di Giamio teaches that sensitivity to heat of both flexible and rigid PVC compositions can be dealt with by incorporation of a conventional heat stabilizer which includes organic epoxy hydrochlorophyl (column 1, lines 39-51). Example of organic hydrochlorophyl of the epoxy type includes epoxidized soybean oil (column 3, lines 1-2). Flexible "PVC" is one

which contains a significant amount of plasticizer (column 1, lines 37-38). It is the examiner's position that the flexible PVC is a dispersion of PVC in plasticizer.

Even if the flexible PVC is not a dispersion, it is well known in the art that breakdown of PVC caused by heat and light involves liberation of HCl. Light and heat stabilizers are thus added to PVC's to capture trapped HCl and in turn prevent the deterioration of PVC. Furthermore, heat stabilizer that works in a composition having one physical state will be expected to work in a composition having a different physical state, absent evidence to the contrary.

With respect to (B), Yamaguchi discloses a polymer containing vinyl chloride monomer. The teaching of Di Giamio is in fact related to the stabilization of polymers containing vinyl chloride.

With respect to (C), it is well known in the art that breakdown of polyvinyl chloride caused by heat and light involves liberation of HCl. Thus, the role of cadmium or barium salts is to stabilize dispersion by trapping the HCl released from vinyl based polymers and there is nothing on record either in the prior art or present specification to indicate that dispersion, of vinyl chloride polymers which include fluorene containing monomers, is poor in the presence of heat and light stabilizers such as cadmium or barium salts.

With respect to (D), Snyder teaches that the mineral oil composition can be used as an adjunct to other standard compositions that impart desired physical and endurance characteristics to a fabric, e.g. permanent-press and water-repellency etc (column 2, lines 8-15). To date protective coating which

repels water-borne stains has been principally based on fluorocarbon chemistry (column 1, lines 24-26). Thus, a blend of non-ionic surfactants, as taught by Snyder et al, would be expected to promote stability of fluorene based polymer comprising a mineral oil.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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